

FIGURE 1

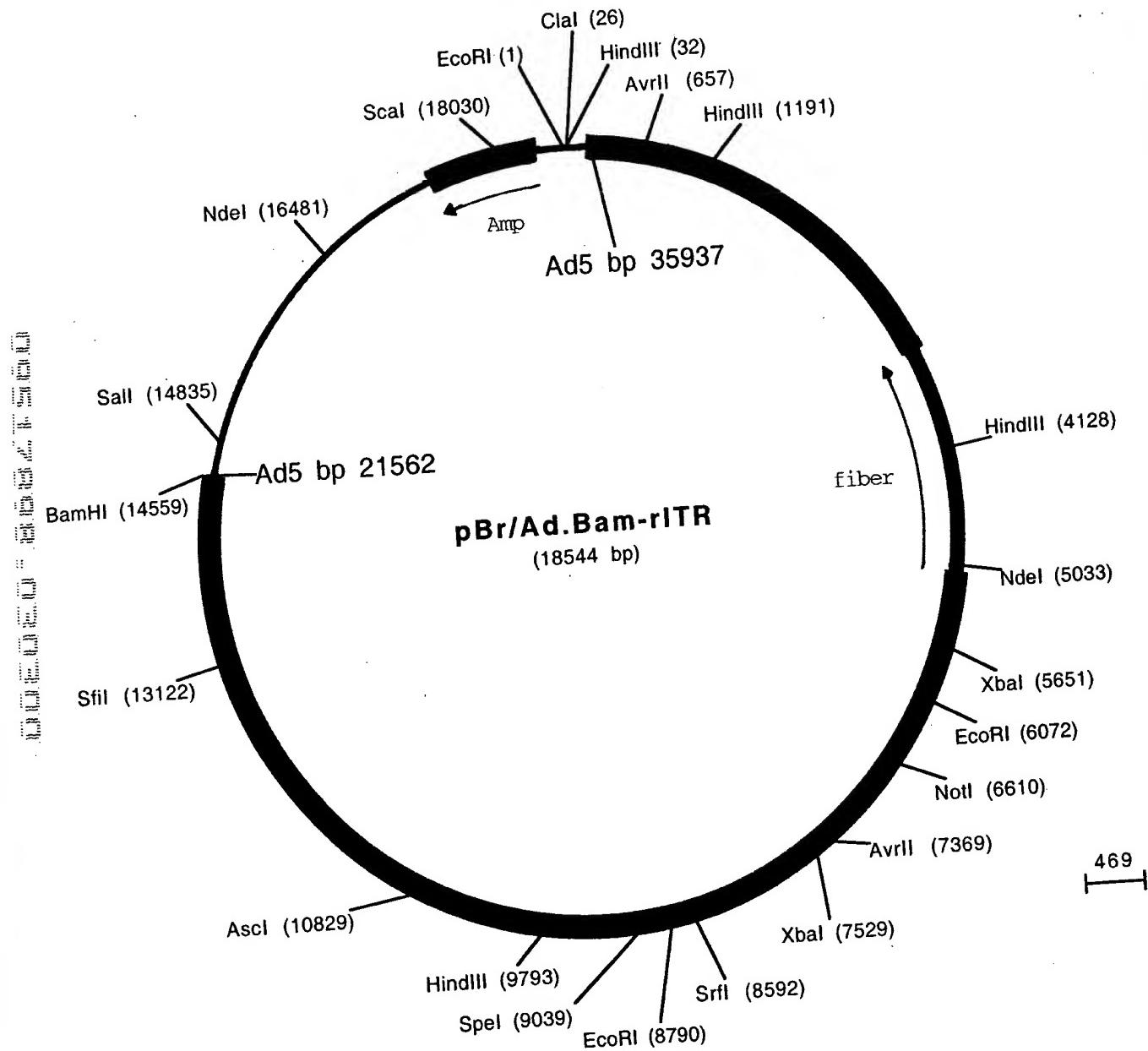


Figure 2

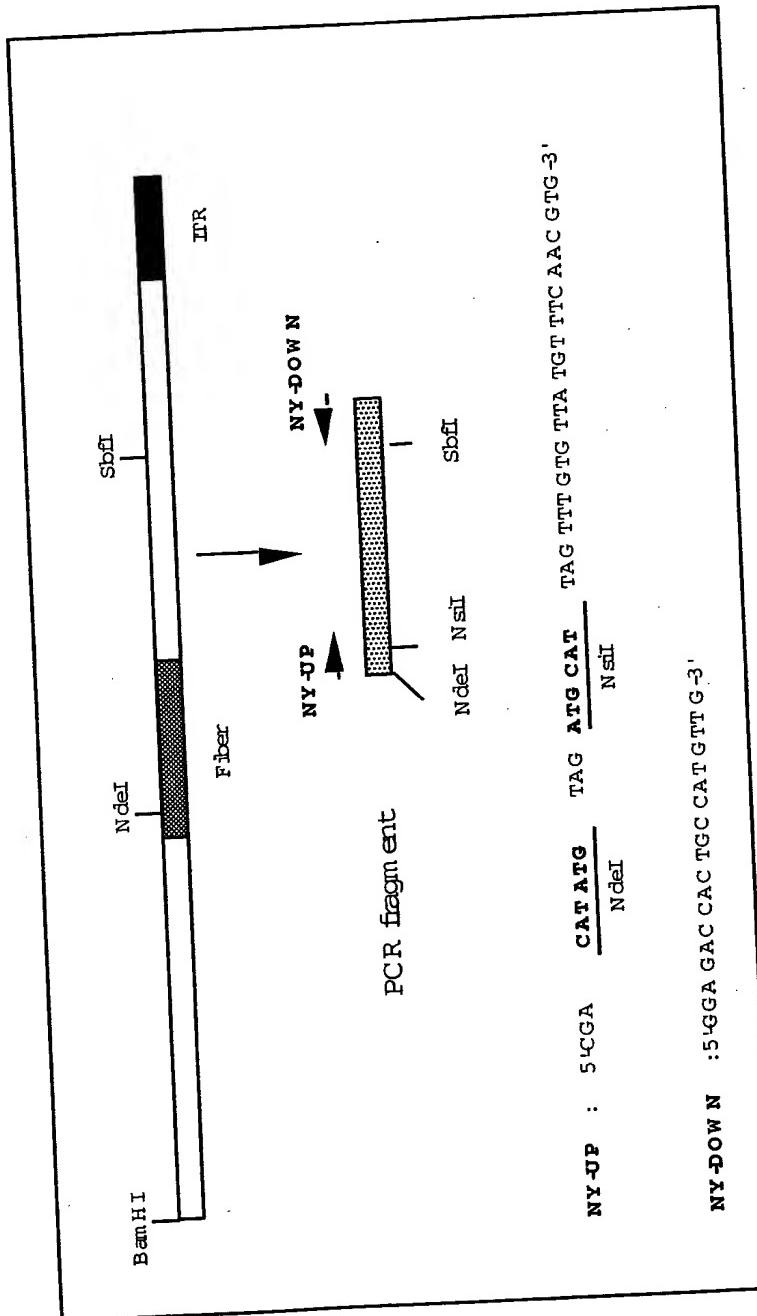


FIGURE 3

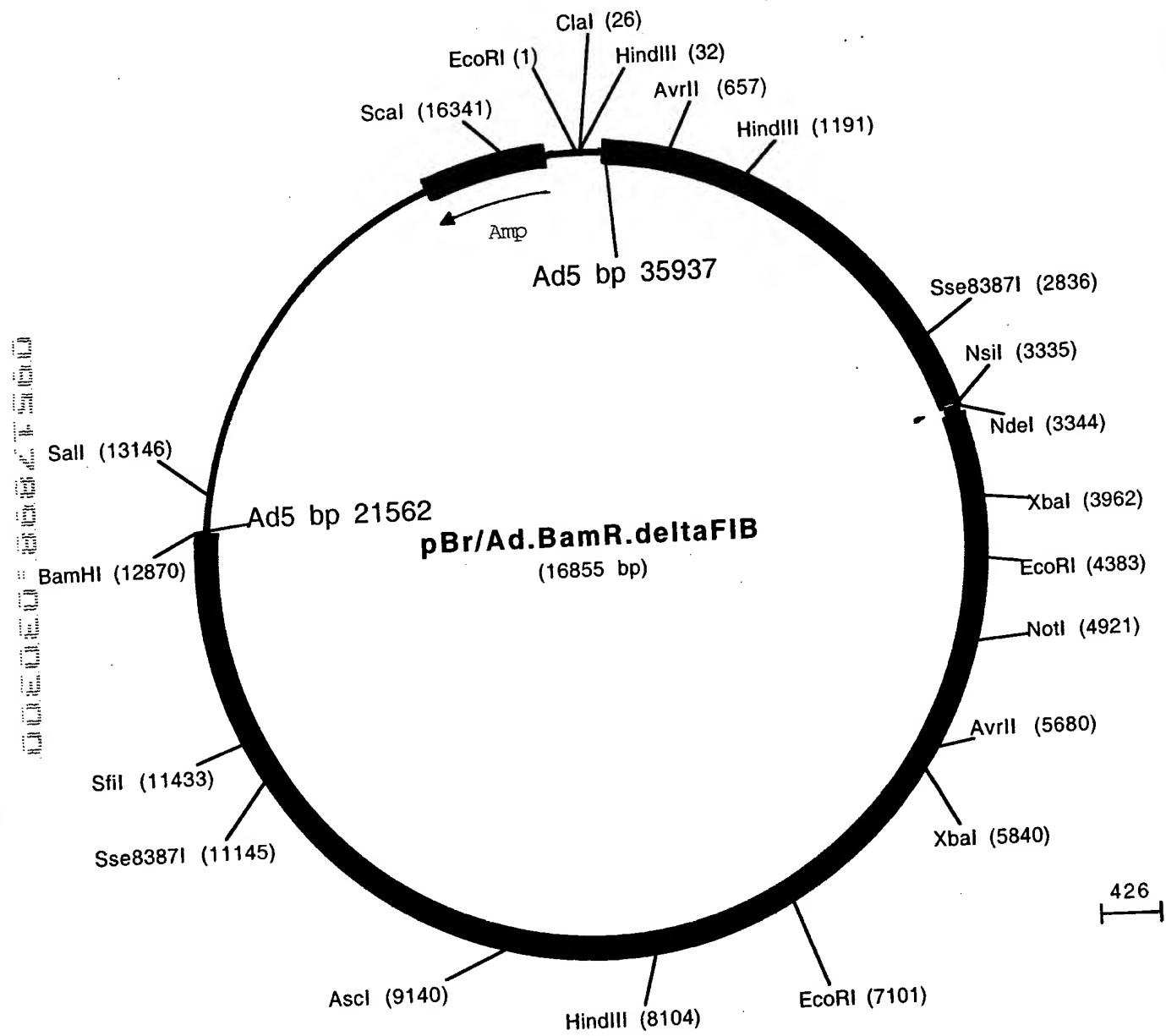


Figure 4: Sequence of Ad5/fib16 chimeric fiber

ATGAAGCGCGCAAGACCGTCTGAAGATACTTCACCCCGTGTATCCATATGAAGATGAAAGCAGCT
CACAAACACCCCTTATAAACCCCTGGTTCATTCCTCAAATGGTTGCACAAAGCCAGATGGAGT
TCTAACTCTTAAATGTGTTAATCCACTCACTACCGCCAGCGGACCCCTCCAACCTAAAGTTGGAAGC
AGTCTTACAGTAGATACTATCGATGGGTCTTGAGGAAAATAACTGCCGAAGGCCACTCACTA
AAACTAACCACTCCATAGGTTATTAAATAGGATCTGGCTTGCAAACAAAGGATGATAAAACTTGT
ATCGCTGGGAGATGGGTTGGTAACAAAGGATGATAAAACTATGTTATCGCTGGGAGATGGGTTAATA
ACAAAAAAATGATGTAATATGTGCCAAACTAGGACATGGCCTTGTGTTGACTCTTCAATGCTATCA
CCATAGAAAACAACACCTTGGACAGGCGAAAACCAAGGCCAACTGTGTAATTAAAGAGGGAGA
AGATTCCCCAGACTGTAAGCTCACTTAGTTAGTGAAGAATGGAGGACTGATAAAATGGATACATA
ACATTAATGGGAGCCTCAGAATATACTAACACCTGTTAAAAACATCAAGTTACAATCGATGTA
ACCTCGCATTGATAATACTGGCAAATTATTACTTACCTATCCCTTAAAGTAACCTGAACCT
TAAAGACAACCAAAACATGGCTACTGGAACCATAACCAGTGCCAAAGGCTTCATGCCAGCACCACC
GCCTATCCATTATAACATGCCACTGAGACCCTAAATGAAGATTACATTATGGAGAGTGTACT
ACAAATCTACCAATGGAACTCTCTTCCACTAAAGTTACTGTACACTAAACAGACGTATGTTAGC
TTCTGGAATGGCCTATGCTATGAATTTCATGGCTCTAAATGCAGAGGAAGCCCCGGAAACTACC
GAAGTCACTCTCATTACCTCCCCCTCTTTTCTTATATCAGAGAAGATGACT**GAATGCATTAG**

FIGURE 5

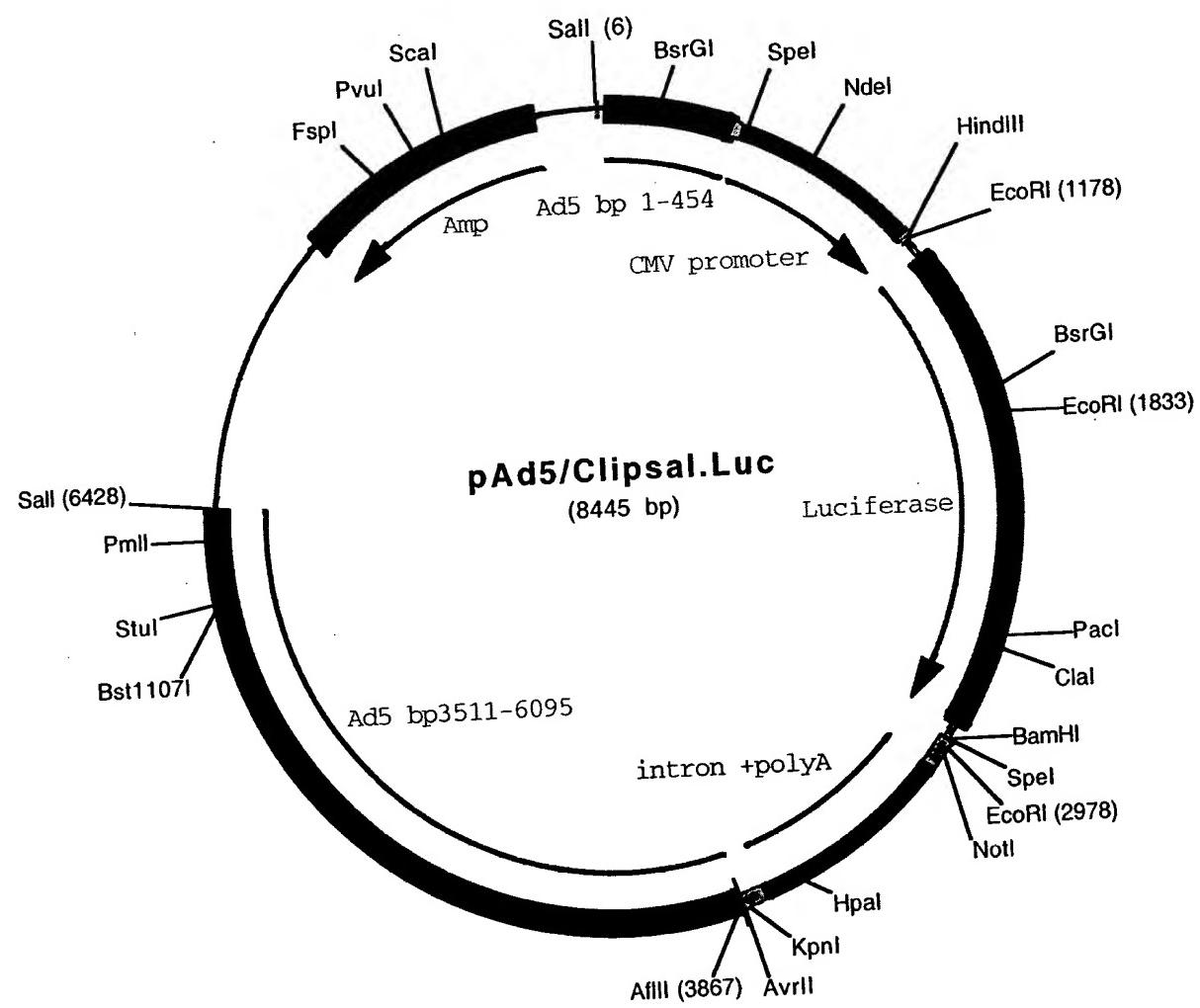
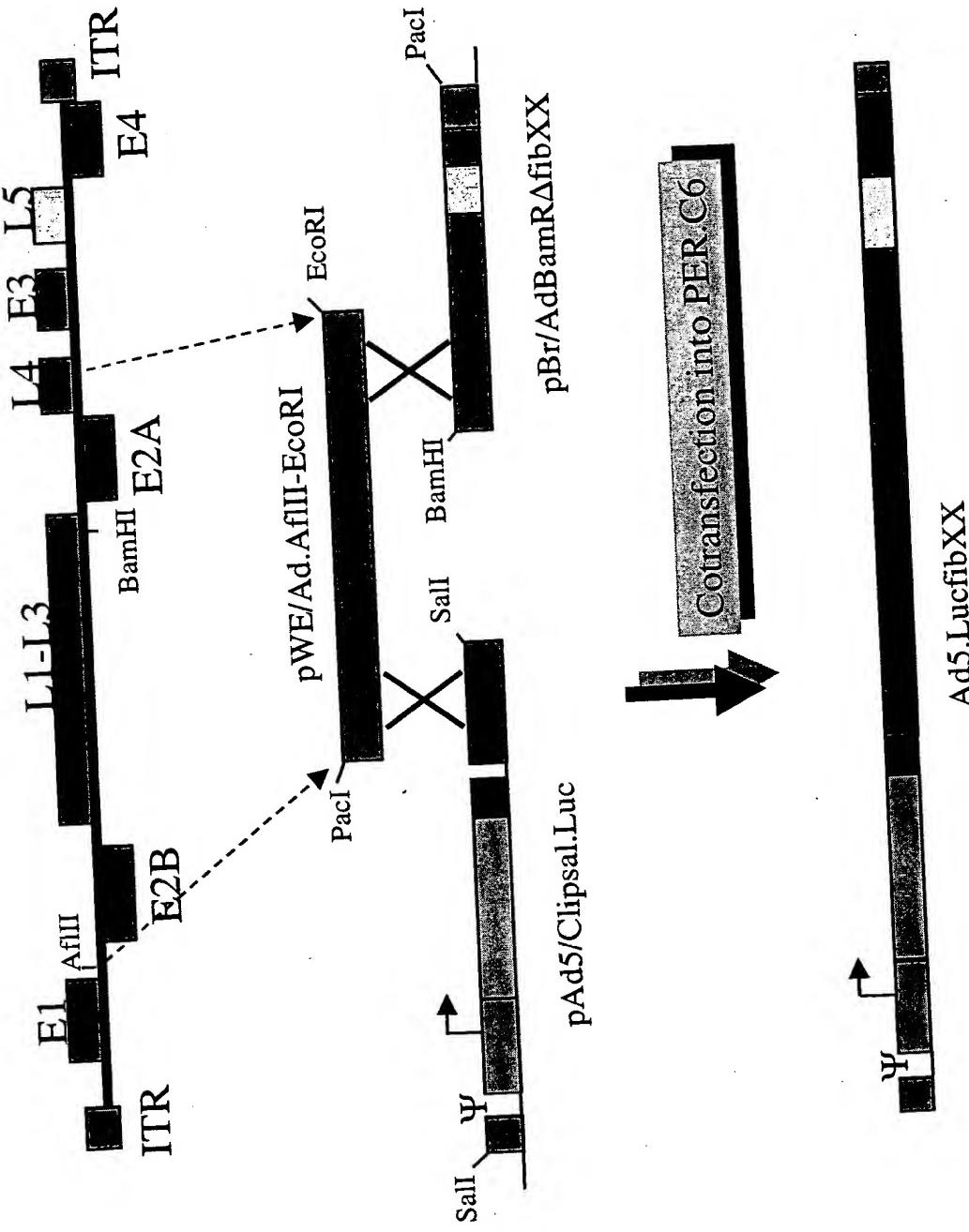


Figure 6: Generation of (chimaeric) adenoviruses



Alignment Report of alignment.DNA, using Clustal method
Wednesday, March 31, 1999 16:13

Weighted residue weight table.

1 AT GGC - CAAACGAGCTCGGCTAACGAGCTCCTCAATCCGGTCTACCCCT Fiber 16 Genbank
 1 AT GAGCGGCCAAGACCGCTCTGAAGATAACCTTCACGCCGGTATATCCTA Ad5/16 Fiber DNA

50 AT GAAGATGAAAGCAGCTCACAAACACCCCTTATAAACCTGGTTTCATT Fiber 16 Genbank
 50 AT GAAGATGAAAGCAGCTCACAAACACCCCTTATAAACCTGGTTTCATT Ad5/16 Fiber DNA

100 TCCCTCAAATGGTTTGCAAAAGCCCAGATGGAGTCTAACCTCTAAATG Fiber 16 Genbank
 100 TCCCTCAAATGGTTTGCAAAAGCCCAGATGGAGTCTAACCTCTAAATG Ad5/16 Fiber DNA

150 TGTAAATCCACTCACTACCGCCAGCGGACCCCTCCAACCTAAAGTTGGAA Fiber 16 Genbank
 150 TGTAAATCCACTCACTACCGCCAGCGGACCCCTCCAACCTAAAGTTGGAA Ad5/16 Fiber DNA

200 GCAGTCTTACAGTAGATACTATCGATGGTCTTGGAGGAAAATAACT Fiber 16 Genbank
 200 GCAGTCTTACAGTAGATACTATCGATGGTCTTGGAGGAAAATAACT Ad5/16 Fiber DNA

250 GCCGCAGCGCCACTCACTAAACTAACCAACTCCATAGGTTTATTAAATAGG Fiber 16 Genbank
 250 GCCGAAGCGCCACTCACTAAACTAACCAACTCCATAGGTTTATTAAATAGG Ad5/16 Fiber DNA

300 ATCTGGCTTGCAAAACAAAGGATGATAAAACTTTGTTATCGCTGGGAGATG Fiber 16 Genbank
 300 ATCTGGCTTGCAAAACAAAGGATGATAAAACTTTGTTATCGCTGGGAGATG Ad5/16 Fiber DNA

350 GGTTGGTAACAAAGGATGATAAAACTATGTTATCGCTGGGAGATGGTTA Fiber 16 Genbank
 350 GGTTGGTAACAAAGGATGATAAAACTATGTTATCGCTGGGAGATGGTTA Ad5/16 Fiber DNA

400 ATAACAAAAAATGATGTACTATGTGCCAAACTAGGACATGGCCTTGTGTT Fiber 16 Genbank
 400 ATAACAAAAAATGATGTACTATGTGCCAAACTAGGACATGGCCTTGTGTT Ad5/16 Fiber DNA

450 TGACTCTCCAATGCTATCACCATAGAAAACAACACCTTGTGGACAGGCG Fiber 16 Genbank
 450 TGACTCTCCAATGCTATCACCATAGAAAACAACACCTTGTGGACAGGCG Ad5/16 Fiber DNA

500 CAAAACCAAGCGCCAACGTGTAAATTAAAGAGGGAGAAGATCCCCAGAC Fiber 16 Genbank
 500 CAAAACCAAGCGCCAACGTGTAAATTAAAGAGGGAGAAGATCCCCAGAC Ad5/16 Fiber DNA

550 TGTAAGCTCACTTAGTTCTAGTGAAGAATGGGAGCTGATAAATGGATA Fiber 16 Genbank
 550 TGTAAGCTCACTTAGTTCTAGTGAAGAATGGGAGCTGATAAATGGATA Ad5/16 Fiber DNA

600 CATAACATTAATGGGAGCCTCAGAATATACTAACACCTTGTAAACACCA Ad5/16 Fiber DNA

650 ATCAAGTTACAATCGATGTAAACCTCGCATTGATAATACTGGCCAAATT Fiber 16 Genbank
 650 ATCAAGTTACAATCGATGTAAACCTCGCATTGATAATACTGGCCAAATT Ad5/16 Fiber DNA

700 ATTACTTACCTATCATCCCTAAAGTAACCTGAACTTTAAAGACAACCA Ad5/16 Fiber DNA

750 AACATGGCTACTGGAACCATAACCAAGTGCCTGGGAGCTTCATGCCAGCA Fiber 16 Genbank
 750 AACATGGCTACTGGAACCATAACCAAGTGCCTGGGAGCTTCATGCCAGCA Ad5/16 Fiber DNA

800 CCACCGCCATTCATTAACATACGCCACTGAGACCCCTAAATGAAGAT Fiber 16 Genbank
 800 CCACCGCCATTCATTAACATACGCCACTGAGACCCCTAAATGAAGAT Ad5/16 Fiber DNA

850 TACATTATGGAGAGTGTACTAACAAATCTACCAATGGAACTCTCTTCC Fiber 16 Genbank
 850 TACATTATGGAGAGTGTACTAACAAATCTACCAATGGAACTCTCTTCC Ad5/16 Fiber DNA

900 ACTAAAAGTTACTGTCACACTAACAGACGTATGTTAGCTCTGGAAATGG Fiber 16 Genbank
 900 ACTAAAAGTTACTGTCACACTAACAGACGTATGTTAGCTCTGGAAATGG Ad5/16 Fiber DNA

950 CCTATGCTATGAATTTCATGGCTCTAAATGCAGAGGAAGCCCCGGAA Fiber 16 Genbank
 950 CCTATGCTATGAATTTCATGGCTCTAAATGCAGAGGAAGCCCCGGAA Ad5/16 Fiber DNA

1000 ACTACCGAAGTCACTCTCATTACCTCCCCCTTCTTTCTTATATCAG Fiber 16 Genbank
 1000 ACTACCGAAGTCACTCTCATTACCTCCCCCTTCTTTCTTATATCAG Ad5/16 Fiber DNA

1050 AGAAGATGACTGA Fiber 16 Genbank
 1050 AGAAGATGACTGAATGCATTAGTTGTGTTATGTTCAACGTGTTATT Ad5/16 Fiber DNA

1100 TCAATTG Fiber 16 Genbank
 1100 TCAATTG Ad5/16 Fiber DNA

1062 Decoration 'Decoration #1': Box residues that differ from Fiber 16 Genbank.

Alignment Report of alignment.prot, using
Wednesday, March 31, 1999 16:19

the current prot. using the PAM250 residue weight table.

Alignment Report of alignment.plot,
Wednesday, March 31, 1999 16:19

Wednesday, March 31, 1999 16:19 GENBVPYEDESSQHPFIN genbank Fiber 16

1 MAK RAR LSS - SFN P V Y P Y E D E S S Q H P F I N chimeric Ad5/Fib16
1 M - K R A R [P] S E D T F N P V Y P Y E D E S S S Q H P F I N

M E R R A N T I C S E C R D G V L T L K C V N P L T T A S G genbank Fiber 16
15/Fib16

30 P G F I S S N G F A Q S P D G V L T L K C V N P L T T A S G chimeric Ad5/Fib16
30 P G F I S S N G F A Q S P D G V L T L K C V N P L T T A S G chimeric Ad5/Fib16

60 PLQLKVGSSTVDTIDGSDLLP...LGSCLDKLCLSLGDGLV genbank Fiber 16

90 K T N H S I G L L I G S G L Q T K D D K R C E S L E D G L V chimeric Ad5/Fib1
90 K T N H S I G L L I G S G L Q T K D D K L C L S L E D G L V chimeric Ad5/Fib1

...G I T K N D V L C A K L G H G L V genbank Fiber 16

120 T K D D K L C L S L G D G L I T K N D V L C A K L G H G L V genbank Fibrin 15
T K D D K L C L S L G D G L I T K N D V L C A K L G H G L V chimeric Ad5/Fibrin

120 TK D D K L C L S L G D G L I T R N D V E Q M A N T L U T C A K P S A N C V I K E G E genbank Fiber 16

150 F D S S N A I T I E N N T L W T G A K P S A N C V I K E G E chimeric Ad5/Fib1

180 D S P D C K L T L V L V K N G G L I N G Y I T L M G A S E Y chimeric Ad/Fib
180 D S P D C K L T L V L V K N G G L I N G Y I T L M G A S E Y

210 T N T L F K N N Q V T I D V N L A F D N T G Q I I T Y L S S genbank Fiber 16
T N T L F K N N Q V T I D V N L A F D N T G Q I I T Y L S S chimeric Ad5/Fib

240 L K S N L N F K D N Q N M A T G T I T S A K G F M P S T T A generic Fib
L K S N L N F K D N Q N M A T G T I T S A K G F M P S T T A chimeric Ad5/Fib

270 Y P F I T Y A T E T L N E D Y I Y G E C Y Y K S T N G T L F chimeric Ad5/Fit
270 Y P F I T Y A T E T L N E D Y I Y G E C Y Y K S T N G T L F

PIKVTVTLNRRMLASGMAYAMNF SWSLNAE genbank Fiber 16
PIKVTVTLNRRMLASGMAYAMNF SWSLNAE chimeric Ad5/Fib

300 PLK V I V T L N R R M L A S G M A Y A M N F S W S L N A E C H I R I C H A
300 PLK V T V T L N R R M L A S G M A Y A M N F S W S L N A E C H I R I C H A genbank Fiber 16

330 E A P E T T E V T L I T S P F F F S Y I R E D D
E A P E T T E V T L I T S P F F F S Y I R E D D

330 E A P E T T E V T L I T S P F F F S T I R E D .
"11. Few residues that differ from genbank Fiber 16 .

Decoration 'Decoration #1': Box residues that differ from 3.

FIG. 8

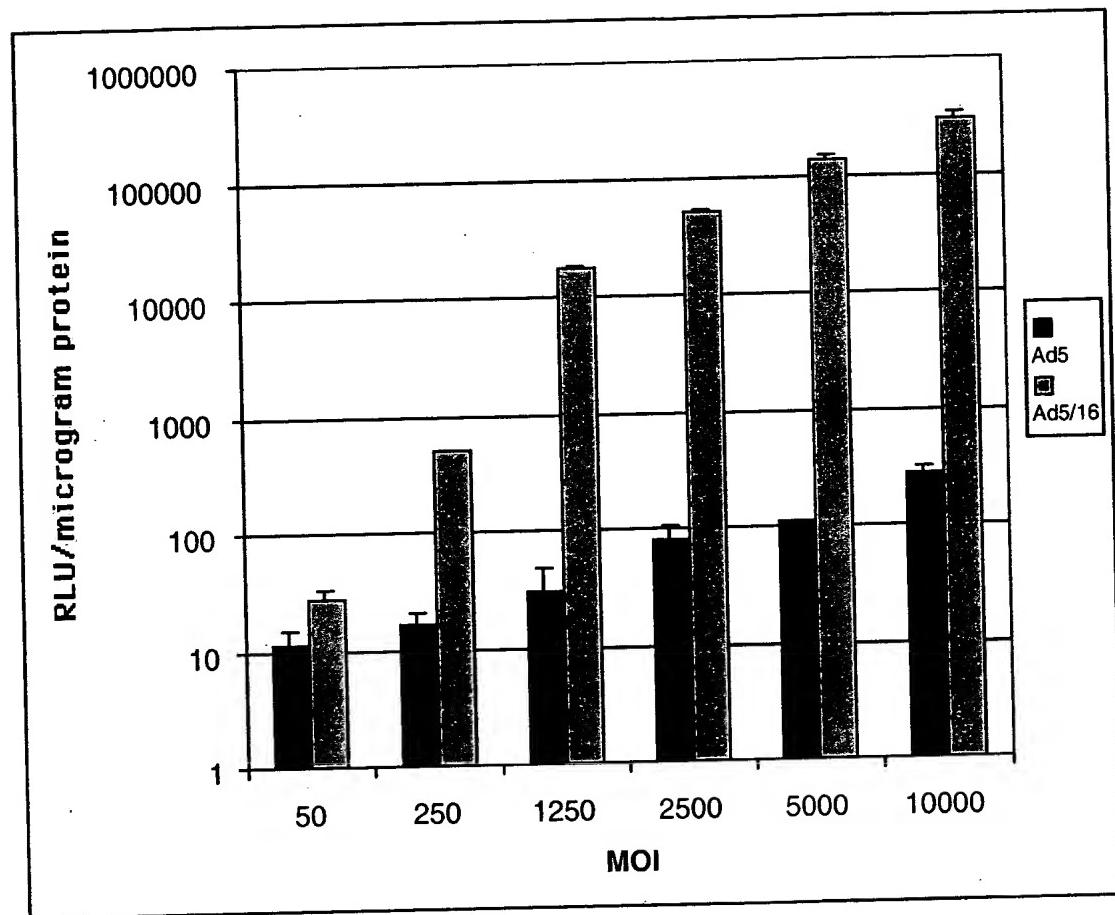


FIG. 9

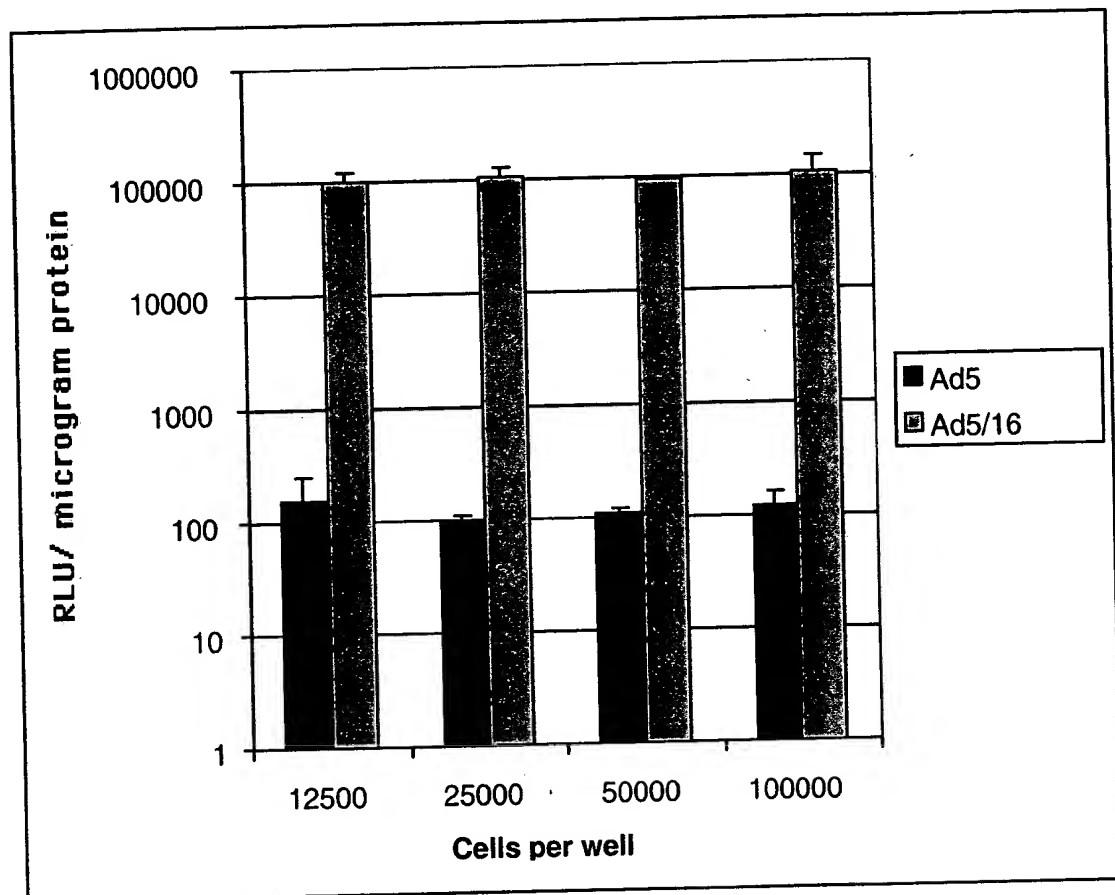


FIG. 10

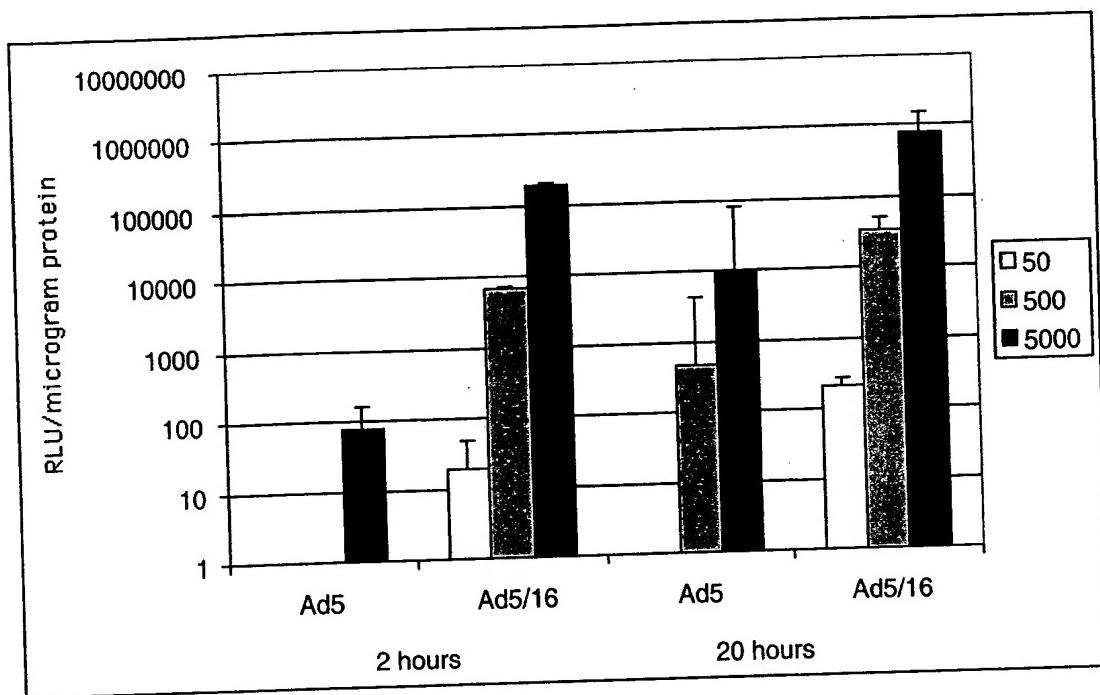


FIGURE 11

Synoviocytes infected with Ad.TK

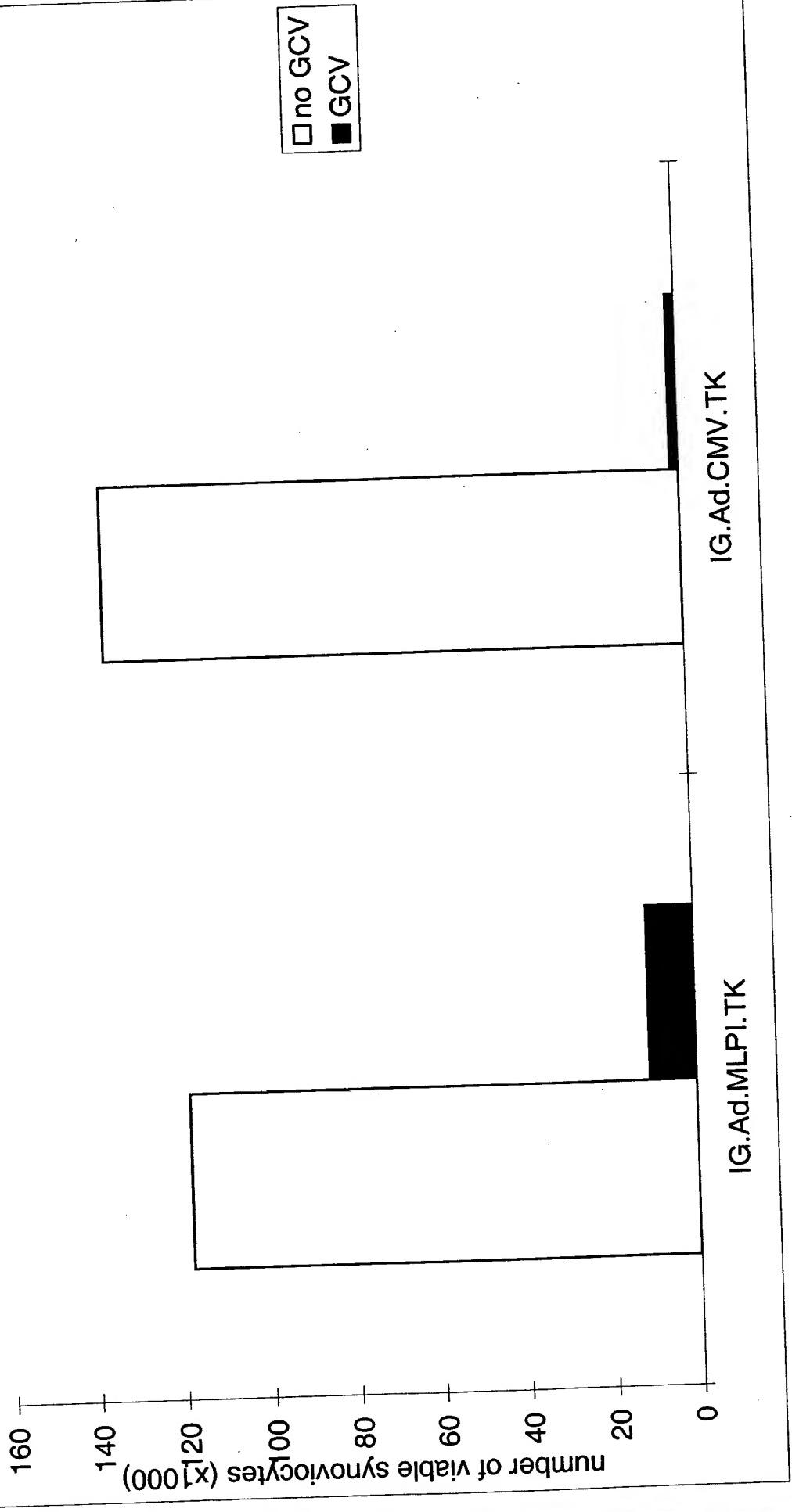


Figure 12

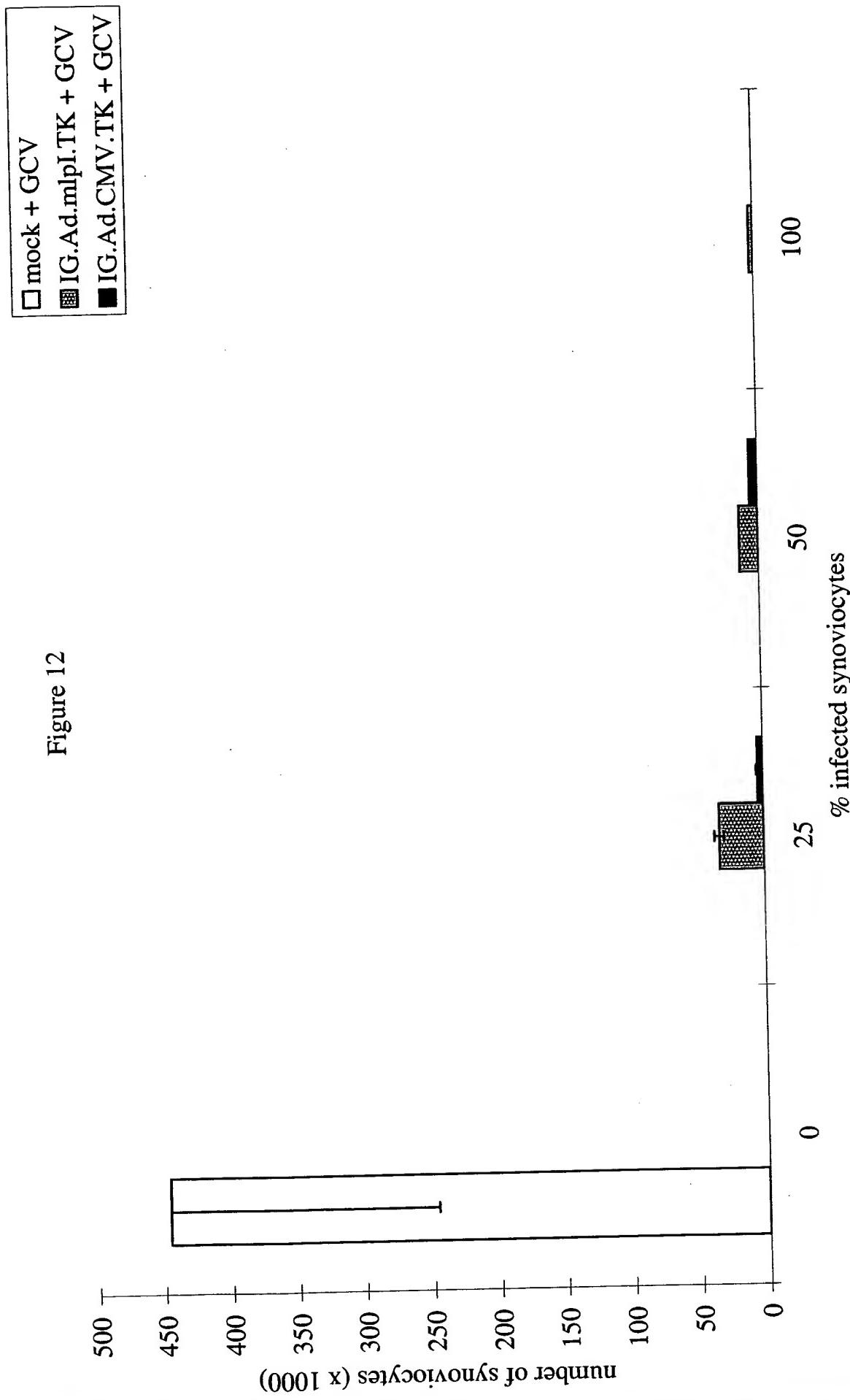


FIGURE 13A

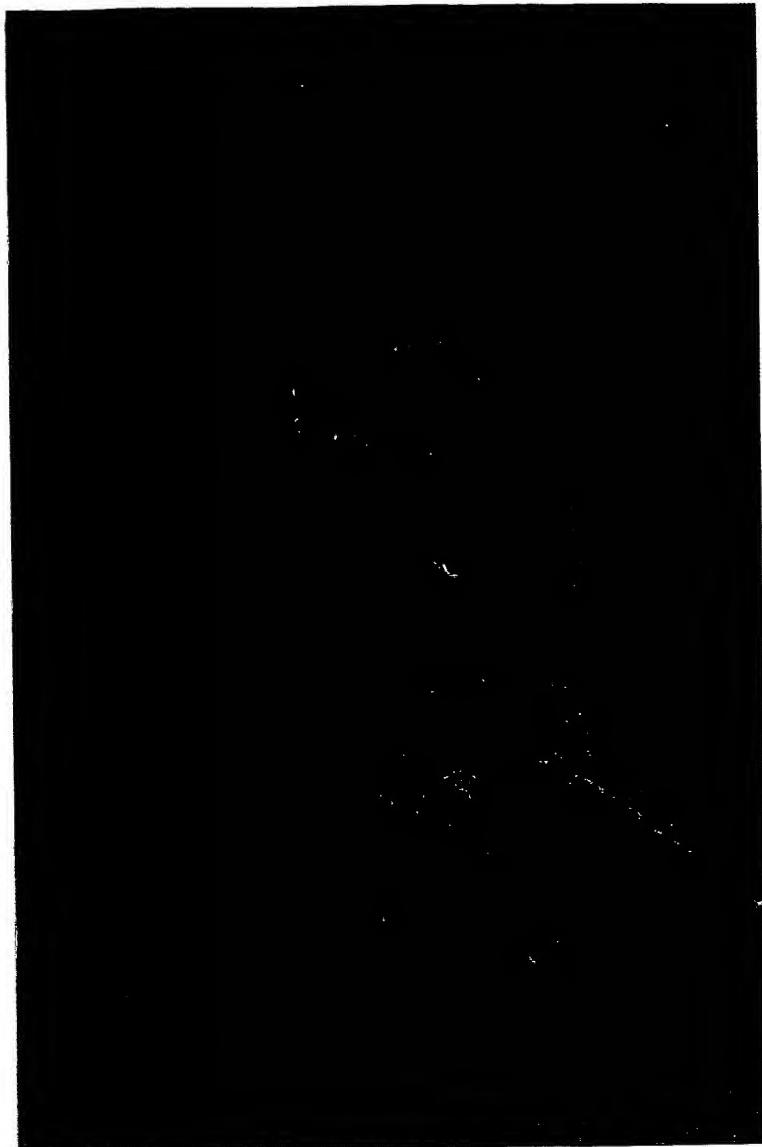


FIGURE 13B



Figure 14: Comparison of infection of Ad5.luc and Ad5.fib16.luc on RA synoviocytes

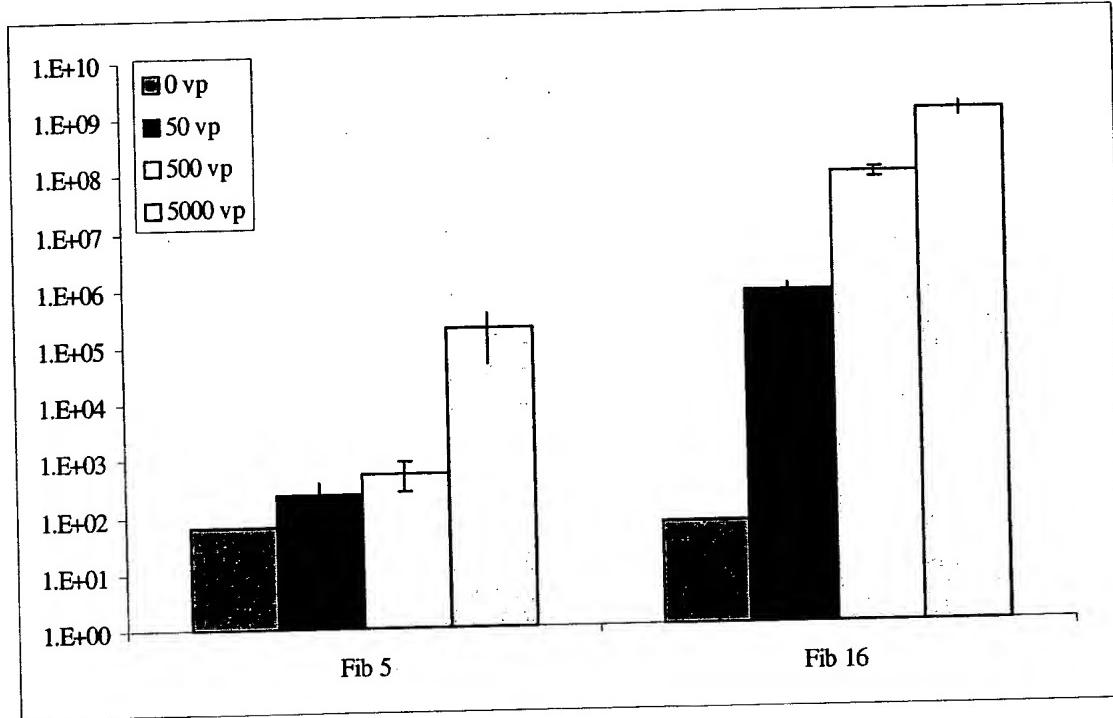


Figure 15

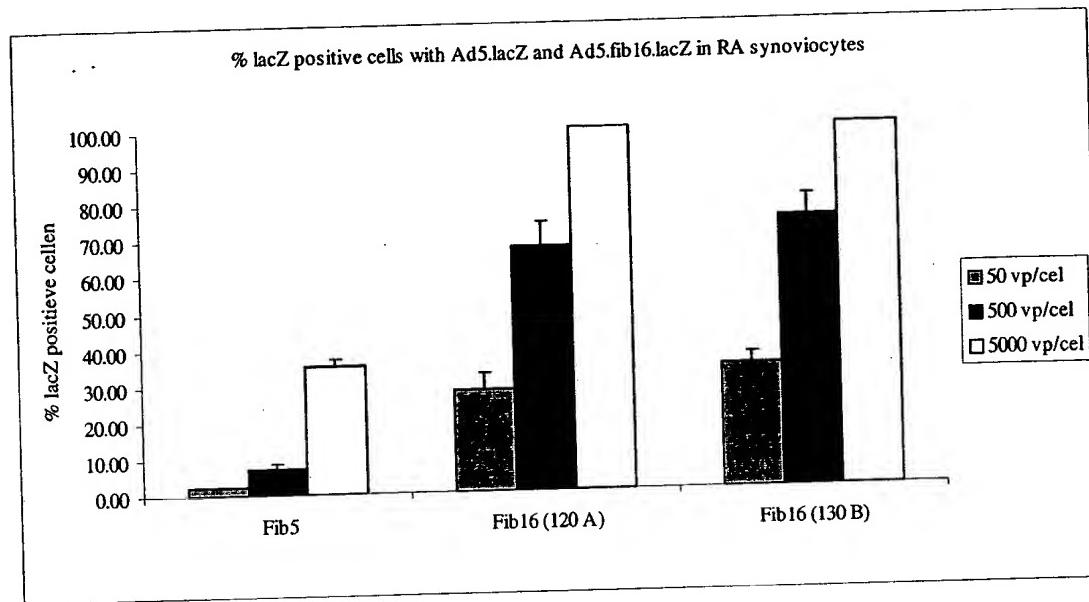


Figure 16A

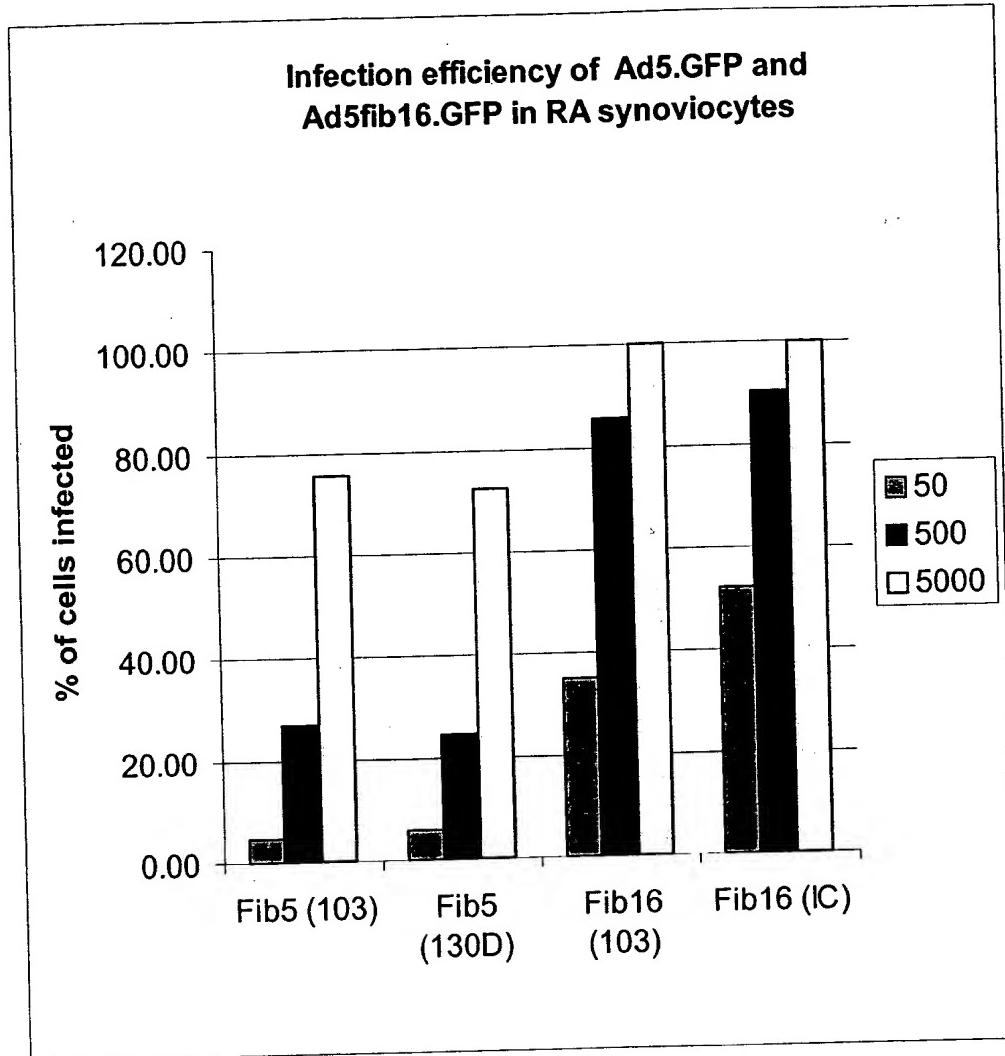


Figure 16B

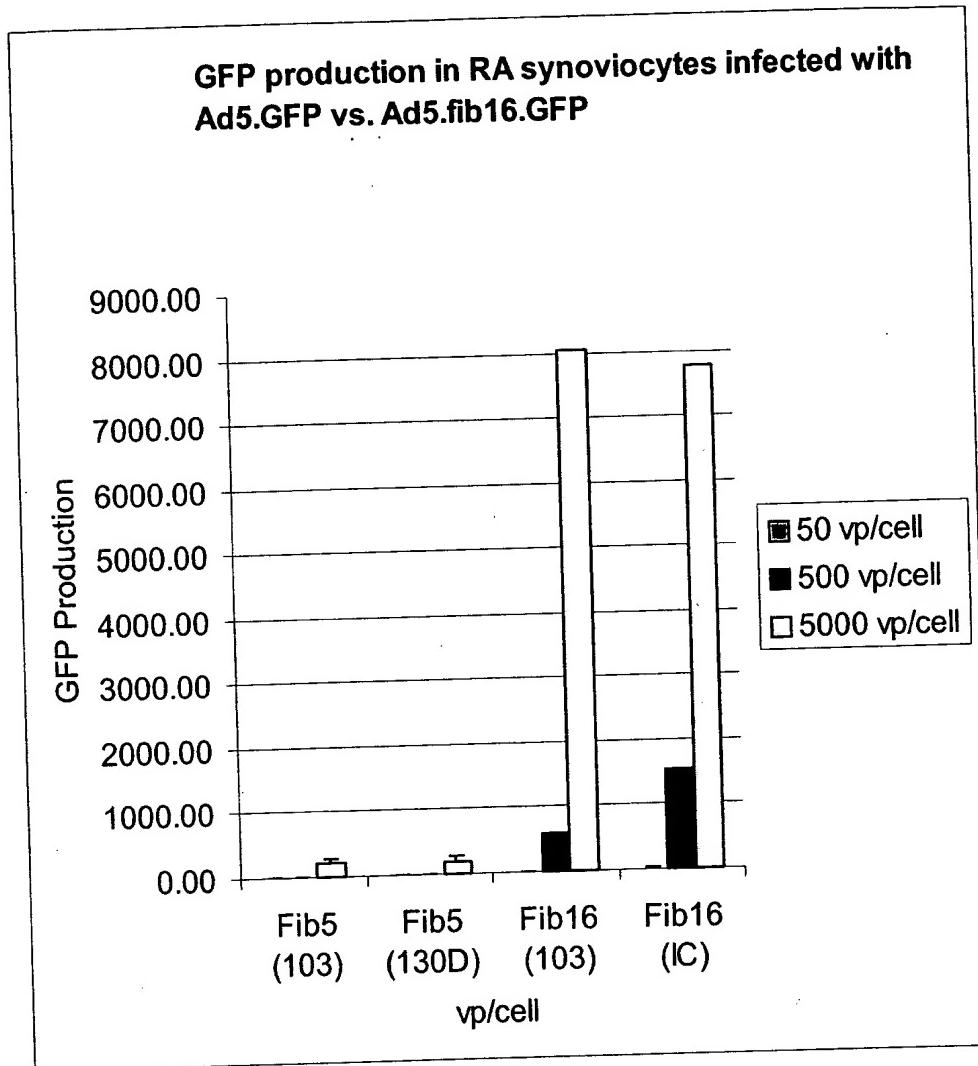


Figure 17: infectivity of panel of chimeric adenoviruses on RA synoviocytes

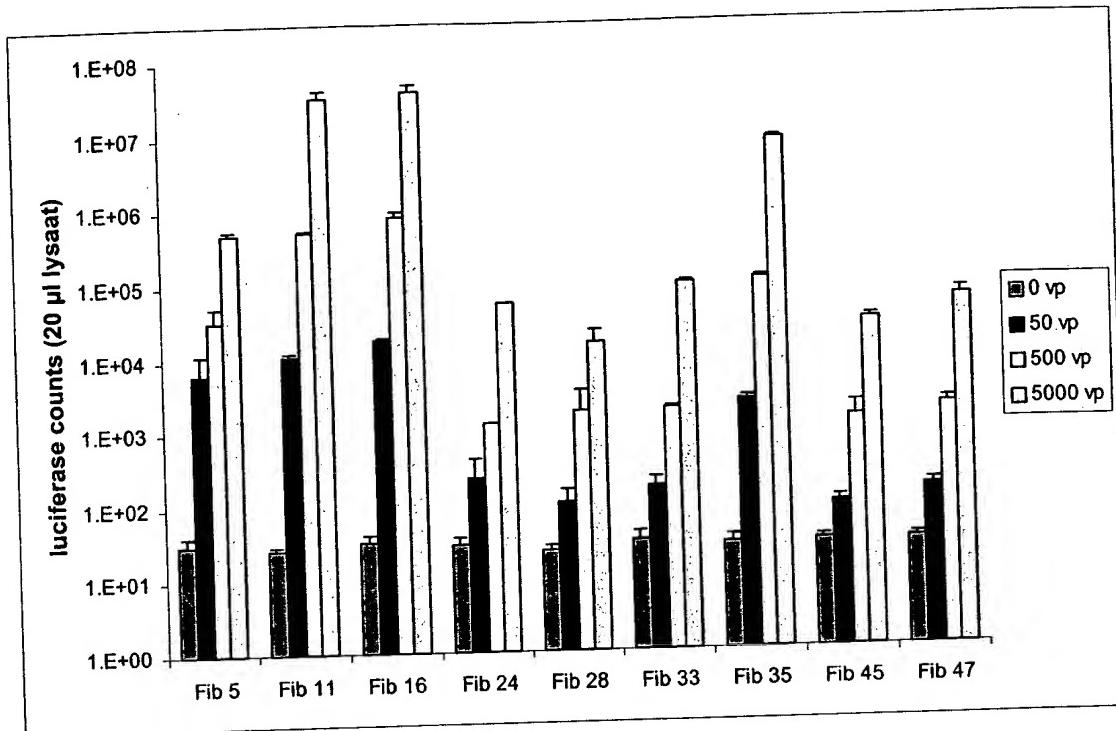


Figure 18A

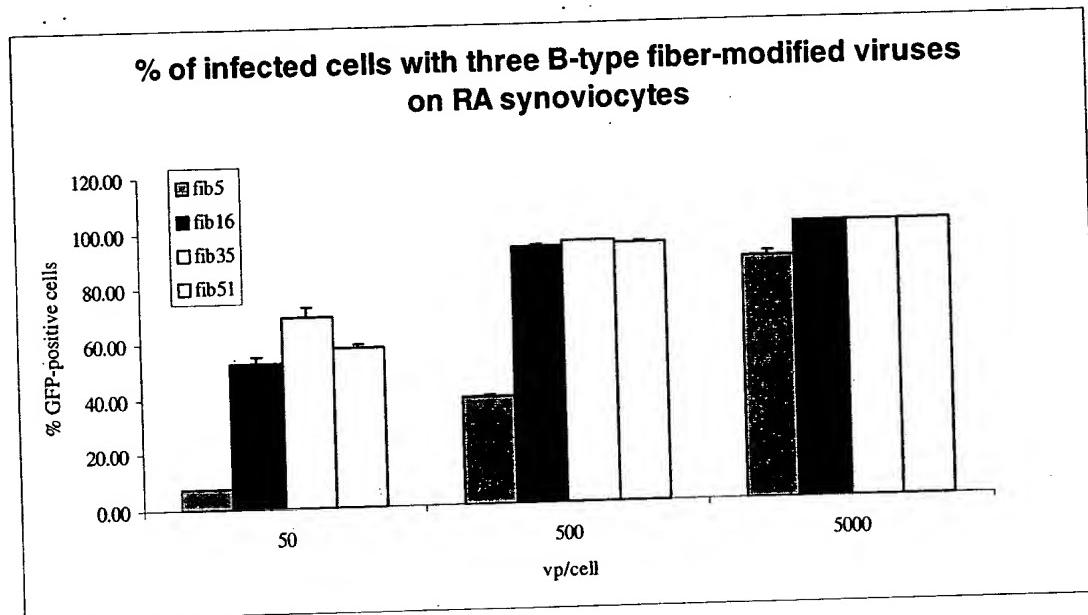


Figure 18B: GFP production with three B-type fiber-modified viruses on RA synoviocytes

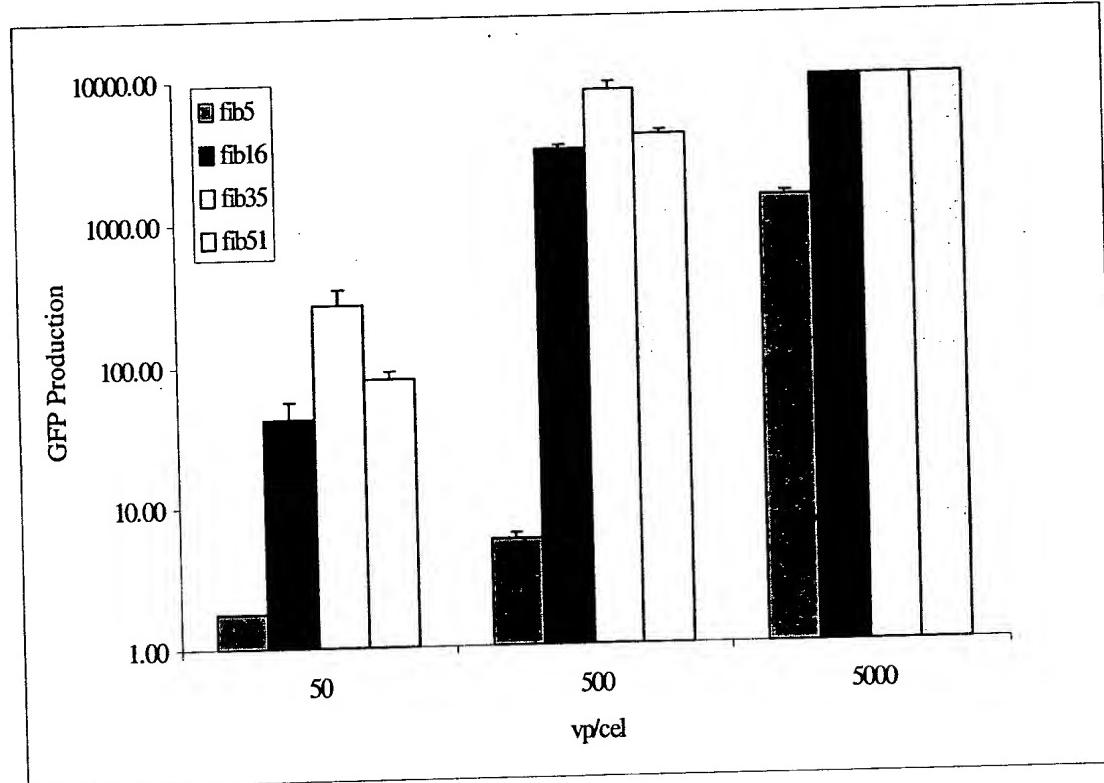


Figure 19

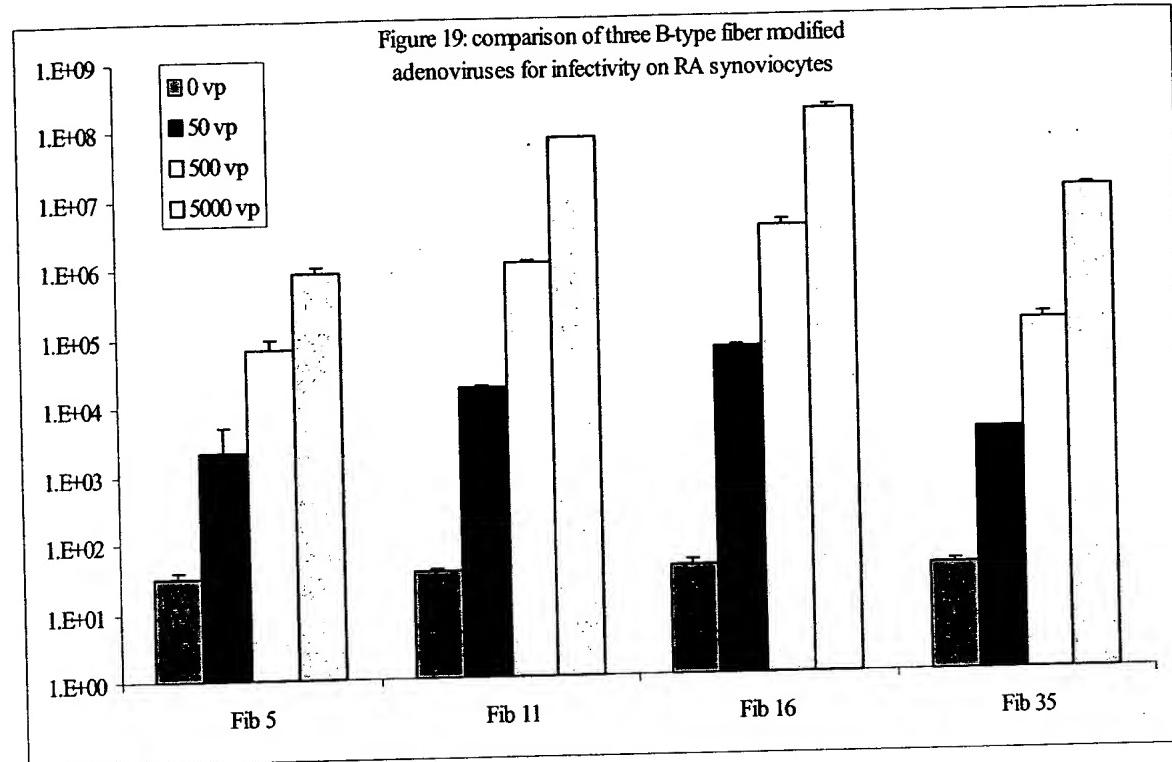


Figure 20: comparison of infectivity Ad5.lacZ vs. Ad5.fib16.lac6 in RA synoviocytes
from

